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EXAMINER	
HAILE, AWET A	

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/735,673	GAZZARD, DARYL	
	Examiner	Art Unit	
	AWET HAILE	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *Amendment filed on 31 January 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-21* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☐ Claim(s) *1-21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. **Claims 1-21** are pending on this application.

Response to Argument

2. Applicant's arguments with respect to **claims 1-21** have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections – 35 USC§ 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1 and 3-7** are rejected under 35 U.S.C. 103(a) as being unpatentable over 3GPP TS 23.060 V3.15.0 (2003-06) hereinafter referred as 3GPP'99 in view of Bleckert et al (US 2002/0061756 A1).

Regarding claim 1, 3GPP'99 discloses, a method for coordinating operation modes of a GPRS network in which a mobile subscriber is registered for communications services(page 41, section 6.3.3.1 co-ordination of paging for a packet and circuit switched services) comprising: transmitting paging messages to the mobile subscriber according to one of a plurality of network operation modes(page 41, Table 2, paging a mobile station based on the operation modes I, II and III) including a primary network operation mode(page 41 Table 2, Network Operation mode I(mode I)) and a secondary network operation mode(Table 2, Network Operating mode II (mode II));

the paging messages including switched circuit paging messages and GPRS paging messages(page 41, second paragraph, notice: mode I includes circuit switching paging message and packet switching paging messages); if a failure condition occurs in the primary network operation mode(page 41, Gs interface is not present): automatically switching the network operation mode of the GPRS network to the secondary network operation mode(page 41, when the Gs interface is not present MSC originated messages go via interface A, thus changing to either mode II or III).

However, the 3GPP'99 failed to teach, if the primary network operation mode is recovered, switching the operation mode of the network back to the primary network operation mode.

Bleckert'756 teaches, if the primary network operation mode is recovered, switching the operation mode of the network back to the primary network operation mode (Figs 5A-5G, notice, Fig 5B shows the primary attempt via the A interface, Fig 5E another attempt via alternative Gs interface, Fig 5G shows switching back to the A interface to receive the page response message, see also paragraph 43 lines 12-15).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of changing the paging path based on the operation modes as taught by Bleckert'756 into the 3GPP'99 system, in order to avoid losses due to absent Gs-interfaces since such a method is suggested by Bleckert'756 (paragraph 44).

Regarding claim 3, 3GPP'99 discloses, wherein the primary network operation mode is a first network operation mode (NOM1) of the GPRS network (page 42, section 6.3.3.1, when Gs interface is present the NOM I is selected).

Regarding claim 4, 3GPP'99 discloses, wherein the network paging messages are transmitted from a mobile switching center (MSC) to a base station controller (BSC) through a Serving GPRS Support Node (SGSN), and then to the mobile subscriber(Fig 18, paging message sent from the MSC/VLR to SGSN and then to the BSS).

Regarding claim 5, 3GPP'99 discloses, wherein the secondary network operation mode is a second network operation mode (NOM2) of the GPRS network (page 42, section 6.3.3.1, when Gs interface is not present the NOM II is selected).

Regarding claim 6, 3GPP'99 discloses, switching the operation mode of the network to a third-preferred network operation mode when the secondary operation mode is failed (page 42, section 6.3.3.1, when Gs interface is not present the NOM II or NOM III is selected, thus paging messages are forwarded based on the mobile stations mode of operation).

Regarding claim 7, 3GPP'99 discloses, wherein the third-preferred operation mode is a third network operation mode (NOM 3) of the GPRS network(page 42, section 6.3.3.1, when Gs interface is not present the NOM II or NOM III is selected, thus paging messages are forwarded based on the mobile stations mode of operation).

6. **Claims 8-12, 16, 17, 19 and 20** are rejected under 35 U.S.C. 103(a) as being unpatentable over 3GPP'99 in view of Landais et al (US 2002/0137532 A1).

Regarding claim 8, 3GPP'99 discloses, a method for coordinating operation modes of a GPRS network in which a mobile subscriber subscribes for communications service (page 41, section 6.3.3.1 co-ordination of paging for a packet and circuit switched services), comprising:

transmitting a paging messages to a mobile subscriber(page 41, paragraph 1), the paging messages including switched circuit paging messages and GPRS paging messages(page 41, paragraph 1, notice: the coordination of paging for circuit switched paging and packet switching paging), wherein the paging messages are sent, based on a preference of the mobile subscriber(page 42, last paragraph, mobile station selects primary operation mode)via one of a first routing and a second routing(page 42, last paragraph, via a circuit switching or packet switching), wherein in the first routing, the paging messages are sent via a first interface and a second interface(Fig 2, Gs and Gb interface see also page 41, if Gs interface is present paging the mobile station via Gs interface and Gb interface), and in the second routing(mode II), the paging messages are sent via a third interface(Fig 2, A interface, page 41, mode II , paging the mobile station via the A interface);

if the first routing is unavailable for transmitting the network message due to a failure in one or both of the first interface and the second interface (page 41 paragraph 5, if the Gs interface is not present) transmitting the paging messages to the mobile subscriber via the second routing (page 41, if the Gs interface is not present, transmitting the paging message via the A interface).

However, 3GPP'99 failed to teach, after the first routing is recovered, transmitting further paging messages to the mobile subscriber via the first routing.

Landaise'532 teaches, after the first routing is recovered, transmitting further paging messages to the mobile subscriber via the first routing (see paragraph 34. notice: the primary

choice to send paging messages from MSC to the mobile station is via the Gs interface, because the MSC can detect the presence of Gs interface if the mobile station is GPRS attached)

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of switching back to the primary path upon detecting the presence of Gs interface as taught by Landaise'532 into the GSM system, in order to send the paging message, when the mobile station is in packet transfer mode or packet idle mode, since such a method is disclosed by Landaise'532(paragraph 35 and 36).

Regarding claim 9, 3GPP'99 discloses, wherein in the first routing (mode I), the paging messages are sent via one of circuit-switched and packet-switched channels (page 41, paragraph 2 paging messages are sent on CCCH paging channel), and in the second routing, the paging messages are sent via the circuit-switched channels (page 41, paragraph 3, NOM II sending a CS paging message on the CCCH channel).

Regarding claim 10, 3GPP'99 discloses, wherein the first interface is between a mobile switching center (MSC) and a Serving GPRS Support Node (SGSN)(Fig, 2, Gs interface) the second interface is between the SGSN and a base station controller (BSC)(Fig 2, Gb interface), and the third interface is between the MSC and the BSC(Fig 2, A interface).

Regarding claim 11, 3GPP'99 discloses, resetting a BTS Virtual Circuit Identifier (BVCI) when the first routing is available (page 144, section 2.6.3.2, note; BVCI is used for addressing the Qos and mobile station identification).

Regarding claim 12, 3GPP'99 discloses, wherein the reset of the BVCI is initiated by either a SGSN when the first interface is available or by a BSC when the mobile subscriber wishes to transmit signals via the first routing (page 144, section 12.6.3.4 flow control between the SGSN and Gb interface).

Regarding claim 16, 3GPP'99 discloses, when the second routing is selected as a primary operation mode and the first routing is available(page 41, when the Gs interface is present), further comprising: transmitting a first-interface indication message indicating that the first interface is available(page 43, Fig 20, the SGSN notifying the MSC on the current status of the MS via the Gs interface); responding to the first-interface indication message, transmitting an acknowledge signal confirming that the second routing process is preferred(Fig 18,sending a page message via the first interface) ; and transmitting a block message to block the first interface to ensure that the network message is sent to the mobile subscriber via the third interface(Fig 97, BSS suspending the GPRS service and receiving messages via the A interface).

Regarding claim 17, 3GPP'99 discloses, transmitting a BVCI-unblock message indicating that the first interface is available (page 174, note: the BSS and SGSN communicate using a BVCI); and responding to the BVCI-unblock message (Fig 97, acknowledging to the

suspend message) transmitting a BVCI-block signal to block the first interface to ensure that the network message is sent to the mobile subscriber via the third interface (Fig 97. suspending the GPRS network to insure connection between the BSS and MSC via the A interface).

Regarding claim 19, 3GPP'99 discloses, a system for coordinating operation modes of a GPRS network, the system (page 41, section 6.3.3.1 co-ordination of paging for a packet and circuit switched services) comprising: a mobile station controller (MSC) for transmitting packet signals to the mobile subscriber via the first routing process or receiving packet signals from the mobile subscriber via the first routing process (Fig 18, MSC/VLR sending a paging signal via SGSN);

a base station control center (BSC) for managing the calls transmitted/received to/from the mobile subscriber(Fig 18, BSS receiving a paging signal from the SGSN and forward it to the MS);a Serving GPRS support node (SGSN) located between the BSC and the MSC(Fig 18, the SGSN receiving paging messages from the MSC/VLR and forwarding it to BSS);
a database for storing a preferred list of network operation modes of the GPRS network for which the mobile subscriber registers(Fig 18, Visitor Location Register(VLR), VLR is a database which stores information regarding all the mobile stations that are currently under the jurisdiction of the MSC);

the MSC, BSC and SGSN configured to route paging messages to the mobile subscriber according a current network operation mode(Fig 18; shows a paging procedure, which includes

MS, BSS, SGSN and MSC/VLR according to the network operation mode I)
the MSC, BSC and SGSN configured to switch the current network operation mode from a primary network operation mode to a secondary network operation mode when a failure prevents routing of paging messages in the primary operation mode(page 41, up on detecting the Gs interfaces absence, switching to network operation mode II or III);

However, 3GPP'99 failed to teach, the MSC, BSC and SGSN configured to switch the current network operation mode from the secondary network operation mode to the primary network operation mode upon a clearing of the failure preventing the routing of paging messages in the primary operation mode.

Landaise'532 teaches, the MSC, BSC and SGSN configured to switch the current network operation mode from the secondary network operation mode to the primary network operation mode upon a clearing of the failure preventing the routing of paging messages in the primary operation mode (paragraph 34, the primary choice to send paging messages from MSC to the mobile station is via the Gs interface, because the MSC can detect the presence of Gs interface if the mobile station is GPRS attached).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of switching back to the primary path upon detecting the presence of Gs interface as taught by Landaise'532 into the GSM system, in order

to send the paging message if the mobile station is in packet transfer mode or packet idle mode, since such a method is disclosed by Landaise'532(paragraph 35 and 36).

Regarding claim 20, 3GPP'99 discloses, wherein the preferred list of network operation modes stored in the database is accessible by the BSC (Fig 20, BSS forwarding and receiving information about the MS from MSC/VLR).

7. **Claims 13-15, 18 and 21** are rejected under 35 U.S.C. 103(a) as being unpatentable over 3GPP'99 and Landaise'532 as applied to **claims 8 and 19** above, and further in view of Aaltonen (US 2002/0110116 A1).

Regarding claim 13, 3GPP'99 and Landaise'532 failed to teach, transmitting a failure indication message from the SGSN to the BSC indicating that the first interface is unavailable of transmission on; receiving a failure acknowledge message from the BSC and switching the operation mode of the network to the second routing; and the MSC transmitting the paging messages to the mobile subscriber via the third interface.

Aaltonen'116 teaches, transmitting a failure indication message from the SGSN to the BSC indicating that the first interface is unavailable (paragraph 18, notifying the BSC about the error occurred on the SGSN); receiving a failure acknowledge message from the BSC and switching the operation mode of the network to the second routing (paragraph 19, suspending the GPRS services suspends SGSN); and the MSC transmitting the paging messages to the mobile

subscriber via the third interface(paragraph 19, after suspending the GPRS the MS starts communicating via the MSC/VLR, note; in order to send and receive short messages the mobile station have to send location update to MSC/ VLR and receive paging messages from the MSC/VLR).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of sending transmission errors from SGSN to the BSC when the transmission fail as taught by Aaltonen'116 into the 3GPP'99 system, in order to suspend the GPRS to send message via the GSM network, since such a message is suggested by Aaltonen'116(paragraph 8).

Regarding claim 14, 3GPP'99 and Landaise'532 failed to teach, when the first interface is recovered, the SGSN sending a recovered message to the BSC indicating that the first interface is recovered; the BSC responding to the recovered message and switching the operation mode to the first routing; and the MSC transmitting the further network messages to the mobile subscriber via the first and second interfaces.

Aaltonen'116 teaches, when the first interface is recovered, the SGSN sending a recovered message to the BSC indicating that the first interface is recovered (paragraph 20, based on the current operation of the mobile station, updating messages are exchanged between BSC and SGSN); the BSC responding to the recovered message and switching the operation mode to the first routing(paragraph 20, the BSC switching the operation to the GPRS services);

and the MSC transmitting the further network messages to the mobile subscriber via the first and second interfaces(Fig, 1 the MS receives short messages via the Gs and Gb interface).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of exchanging update messages between mobile BSC and SGSN on the current operation mode of the MS as taught by Aaltonen'116 into the 3GPP'99 system, in order to enable the MS to transmit and receive data via the GPRS network, since such a method is suggested by Aaltonen'116(paragraph 20).

Regarding claim 15, 3GPP'99, teaches, sending a BTS (base transceiver station) virtual circuit identity (BVCI) block signal from the SGSN to the BSC(see page 144, section 12.6.3.4, flow control per MS) and the BSC responding to the BVCI-block signal by sending a BVCI-block- acknowledge signal and switching the operation mode of the network to the second routing(page 144, section 12.6.3.4, note: updating information about the current operation mode is exchanged between the BSS and SGSN).

Regarding claim 18, 3GPP'99 and Landaise'532 failed to teach, wherein when the mobile subscriber wishes to use the first routing process, transmitting a first-routing request message from the mobile subscriber to request for a connection to the first routing process; responding to the request message and transmitting a unblocked message to unblock the first-interface; and transmitting/receiving packet signals to/gem the mobile subscriber via the first

routing process or receiving packet signals from the mobile subscriber via the first routing process.

Aaltonen'116 teaches, wherein when the mobile subscriber wishes to use the first routing process, transmitting a first-routing request message from the mobile subscriber to request for a connection to the first routing process(see paragraph 21, the user selecting whether to transmit the messages via the GSM network or the GPRS network); responding to the request message and transmitting a unblocked message to unblock the first-interface(paragraph 23, transmitting the message according to the user choice, note the blocking and unblocking the GPRS network is explained on paragraph 19 and 20); transmitting packet signals to the mobile subscriber via the first routing process or receiving packet signals from the mobile subscriber via the first routing process(Fig 3, steps 301 and 303).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of blocking and unblocking the GPRS network based on the status of the interface and the user choice as taught by Aaltonen'116 into the 3GPP'99 system, in order to enable the MS user to transmit and receive data via the GPRS network, since such a method is suggested by Aaltonen'116(paragraph 20).

Regarding claim 21, 3GPP'99 and Landaise'532 failed to teach, wherein the SGSN reports a change of the status of the interface between the SGSN and the MSC to the BSC so that

the BSC decides what network operation mode to use based on the preferred list stored in the database.

Aaltonen'116 teaches, wherein the SGSN reports a change of the status of the interface between the SGSN (paragraph 19, transmission failure report from the SGSN to the BSC) and the MSC to the BSC so that the BSC decides what network operation mode to use based on the preferred list stored in the database (paragraph 20 and 23, the BSC determining which path to use, and then releasing and suspending the GPRS network based on the user choice).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of blocking and unblocking the GPRS network based on the status of the interface and the user choice as taught by Aaltonen'116 into the 3GPP'99 system, in order to enable the MS user to transmit and receive data via the GPRS network, since such a method is suggested by Aaltonen'116(paragraph 20).

8. **Claim 2** is rejected under 35 U.S.C. 103(a) as being unpatentable over 3GPP'99 and Bleckert'756 as applied to **claim 1** above, and further in view of Aaltonen'116.

Regarding claim 2, 3GPP'99 and Bleckert'756 failed to teach, storing a registered preferred list of network operation modes selected by the mobile subscriber.

However, Aaltonen'116 teaches, storing a registered preferred list of network operation modes selected by the mobile subscriber (paragraph 21, notice: the user selection to use either one of the GSM or GPRS networks corresponds to mode of operations).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate, the method of storing data on the mobile station, to enable a user select whether to send messages via GSM or GPRS network as taught by Aaltonen'116 into the 3GPP'99 system, in order to enable the user to select a reliable network.

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure, Mizell et al (US 7006478 B1), Maguire et al (US 6996092 B1), Hossain et al (US 6920116 B1), Lundin (US 20040037269 A1), Carisson et al (US 2002/0085537 A1), Vanttinen et al (US 7126940 B2), Josse et al(US 6442159 B2), Salin et al(US 6370390 B1), Gilchrist et al(US 5745695) and Willhelmsson et al (US 6898425 B1) are recited to show paging coordination in telecommunication network.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AWET HAILE whose telephone number is (571)270-3114. The examiner can normally be reached on Monday through Friday 8:30 AM - 4:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MOE AUNG can be reached on (571)272-3474. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AWET HAILE
Examiner
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